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# Syntactic movement and focus-associated implicatures in Hungarian

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## Abstract

*In this paper, I propose that the exhaustive interpretation associated with Hungarian Focus Fronting (FF) is a conventional implicature that belongs to the non-at-issue dimension of meaning and that is directly responsible for the syntactic displacement of the focus constituent. Following a cartographic approach, I defend the view that the interface properties that result from FF, including the associated implicatures at the semantic level, are directly encoded in the syntax in the form of active syntactic features which drive the movement of sentential constituents to dedicated functional projections. In the case of FF, more specifically, these features trigger syntactic movement and generate the relevant implicature. This proposal is based on the observation that, despite being a prominent one – and perhaps the most prominent – the exhaustive reading is not the only possible interpretation that can be associated with FF in Hungarian. Other meanings can be associated with FF in the relevant contexts and under the appropriate conditions, for example, a mirative import of surprise and unexpectedness that need not be exhaustive. From a crosslinguistic viewpoint, moreover, this account provides an explanation for the fact that the exhaustive reading associated with FF, especially in answers to questions, appear to be a language specific property of Hungarian.*

## 1 Introduction

In Hungarian the focus constituent of a sentence can appear in an immediately preverbal position. The prosodic, syntactic, and semantic characteristics associated with this position are such that the existence of a structural focus position has been postulated in the literature, which is assumed to be directly responsible for the encoding of the focus distinctive properties (see Brody 1990; 1995; É. Kiss 1998; 2002). Firstly, the fronted focus constituent bears the main prosodic prominence of the sentence. Secondly, it causes the inversion of the unmarked order ‘VM

(Verb Modifier) + V'. Thirdly, from a semantic viewpoint, preverbal focus expresses exhaustive identification, namely, it exhaustively identifies a member (or a subset) of a contextually salient set of alternatives for which the predicate expressed by the remnant clause may potentially hold.

The characteristic properties of preverbal focus become evident if a comparison with postverbal informational focus is made:

(1) a. *Informational focus*

Tegnap este be mutattam Pétert *Marinak*.  
 last night VM introduce.PST.1SG Peter.ACC Mary.to  
 'Last night I introduced Peter to Mary.'

b. *Identificational focus*

Tegnap este **Marinak** mutattam be Pétert.  
 last night Mary.to introduce.PST.1SG VM Peter.ACC  
 'It was *to Mary* that I introduced Peter last night.'

(É. Kiss 1998: 247)

In the sentence with postverbal focus (1a), the primary pitch accent of the clause falls on the perfective verbal particle *be* (i.e. a type of VM according to É. Kiss 2002);<sup>1</sup> the VM occurs in its unmarked position, namely, adjacent to the left of the verb, and the postverbal narrow focus conveys new non-presupposed information.

By contrast, the fronted focus in (1b) bears main prominence and is immediately followed by the finite verb. It has been assumed that, in the FF configuration, the focus constituent sits in the specifier of a dedicated projection FP, and that verb movement takes place to the head of FP (see Brody 1990; 1995; É. Kiss 1998; 2002). The movement of the verb to a higher position, to the right of the focus, can be easily detected by the fact that it now precedes the VM *be*. Semantically, the fronted focus is interpreted exhaustively.

Different explanations have been offered to account for the distribution of the main prosodic prominence in Hungarian as well as for the postverbal position of the VM in the presence of a fronted focus – some deviating greatly from what has been presented so far. Similarly, the

1. In standard orthography, verbal particles like *be* are written as one single word together with the verb when they occur before the verb, but as a separate word if they appear after the verb. Following É. Kiss (1998), here I disregard this spelling convention and write VMs as separate words to indicate that they occupy a different syntactic position with respect to the verb. In Section 4, however, I will report the sentences used in the questionnaire, in which standard orthography was used. Note also that throughout the paper fronted foci will be marked either in bold or in capital letters, adopting the same style as in the original source, but no semantic difference is meant through this distinction. Postverbal foci will be marked in italics.

exhaustive interpretation of fronted focus has been subject to challenges and disputes. If on the one hand, native speakers agree on the exhaustive interpretation associated with Focus Fronting (FF henceforth), on the other hand, the actual nature of this meaning – whether semantic or pragmatic – is controversial (cf. § 2).

In this paper, I propose that the exhaustive interpretation associated with Hungarian FF is a conventional implicature that belongs to the non-at-issue dimension of meaning, and that it is directly responsible for the syntactic displacement of the focus constituent. I also demonstrate that, despite being a prominent one – perhaps the most prominent – the exhaustive reading is not the only possible interpretation that can be associated with FF in Hungarian. For example, Hungarian FF can be associated with a mirative import, both in declarative and in interrogative clauses, which is not necessarily exhaustive; in declaratives, FF can also perform a corrective function that need not be exhaustive (cf. § 3.2). Given that exhaustivity is only one of the possible interpretations that can be associated with FF, although perhaps the most common one, I conclude that all the meanings that characterize Hungarian FF are non-at-issue conventional implicatures, which add up to the informative content of the sentence. The nature of exhaustivity as a conventional implicature is further confirmed by the application of several tests originally discussed in Potts (2005; 2007) and applied to Italian mirative and corrective focus in Bianchi, Bocci & Cruschina (2015; 2016) (henceforth BBC). Following a cartographic approach (see, e.g., Rizzi 1997; Cinque & Rizzi 2010), I propose that the interface properties that result from FF, including the associated implicatures at the semantic level, are directly encoded in the syntax in the form of active syntactic features which drive the movement of sentential constituents to dedicated functional projections.

The paper is organized as follows. I will start in Section 2 with an overview of the existing analyses of the exhaustive interpretation that in Hungarian arise from FF, distinguishing in particular between the accounts that take the fronted focus to be semantically exhaustive and those that claim that exhaustivity is the result of a pragmatic effect. In Section 3, building on previous work on FF in Italian (BBC 2015; 2016), I will introduce my proposal, defining the notion of focus-associated conventional implicature. In support of my analysis, in this section I will present the results of a questionnaire on the distribution and interpretation of FF in Hungarian which highlights the non-at-issue meanings that can be associated with FF in different contexts and under the appropriate conditions. In particular, I will show that the exhaustive implicature is in complementary distribution with at least one other interpretation, namely, a mirative implicature of surprise. In the light of close comparisons with other languages such as Italian, Hausa, Gungbe, and Sicilian,

where FF is never or is not always associated with exhaustivity, in Section 4, I will argue that the exhaustive implicature cannot simply be understood as a conversational implicature. In Section 5 I will further clarify the nature of the exhaustive implicature, and emphasize the empirical and theoretical advantages of the proposed analysis. In Section 6, I will finally summarize the main points of the paper and conclude with some closing remarks.

## 2 FF and Exhaustivity in Hungarian: An overview

Most accounts of the syntax and the syntax–semantics interface of FF in Hungarian agree that the immediately preverbal position dedicated to fronted foci is associated with an exhaustive interpretation, which is absent when the focus constituent occurs postverbally. Various tests have been proposed to demonstrate the exhaustive identification function associated with focalization and, crucially, these tests only give positive results when applied to FF structures (see Szabolcsi 1981: 519–520, É. Kiss 1998, 2002: 78–79). A first test was proposed by Szabolcsi (1981) to show that the exhaustive interpretation of the fronted focus directly affects the entailments of the sentence and that, thus, exhaustivity is a semantic effect, part of the truth-conditional meaning. To see this, she compared sentence pairs where the first sentence contains two coordinate DPs and the second only one of the two conjuncts: crucially, the second clause is entailed by the first only in the case of postverbal focus (3), but not in the case of a fronted focus (2):

- (2) a. János **Péttert** és Zoltánt mutatta be Marinak.  
 John Peter.ACC and Zoltan.ACC introduce.PST.3SG VM Mary.to  
 ‘As for John, it was Peter and Zoltan that he introduced to Mary.’  
 b. János **Péttert** mutatta be Marinak.  
 John Peter.ACC introduce.PST.3SG VM Mary.to  
 ‘As for John, it was Peter that he introduced to Mary.’
- (3) a. János be mutatta Marinak Péttert és Zoltánt.  
 John VM introduce.PST.3SG Mary.to Peter.ACC and Zoltan.ACC  
 ‘John introduced Peter and Zoltan to Mary.’  
 b. János be mutatta Marinak Péttert.  
 John VM introduce.PST.3SG Mary.to Peter.ACC  
 ‘John introduced Peter to Mary.’

If (3b) is interpreted as a logical consequence of (3a), the same does not hold true of (2) since the constituents in question are fronted foci expressing exhaustive identification.

A second test discussed in É. Kiss (1998: 250; 2002: 78–79), and attributed to Donkas Farkas, consists in the direct negation of the exhaustive identification expressed by the fronted focus, which is logically possible and pragmatically felicitous if the focus is preverbal, as in (4), but not if it is postverbal, as in (5):

- (4) a. János **Pétert** mutatta be Marinak.  
 John Peter.ACC introduce.PST.3SG VM Mary.to  
 ‘As for John, it was Peter that he introduced to Mary.’  
 b. Nem, Zoltánt is be mutatta neki.  
 no Zoltan.ACC also VM introduce.PST.3SG to.her  
 ‘No, he also introduced Zoltan to her.’
- (5) a. János be mutatta Marinak Pétert.  
 John VM introduce.PST.3SG Mary.to Peter.ACC  
 ‘John introduced Peter to Mary.’  
 b. \*Nem, Zoltánt is be mutatta neki.  
 no Zoltan.ACC also VM introduce.PST.3SG to.her  
 ‘No, he also introduced Zoltan to her.’

As the translations show, English clefts have been claimed to carry the same type of exhaustive identification expressed by FF in Hungarian (see É. Kiss 1998).

Interestingly, as both Szabolcsi and É. Kiss observe, exhaustivity seems to be a language specific property of Hungarian FF, given that the equivalent examples in other languages do not exhibit the same behaviour (see also Skopeteas & Fanselow 2011 for crosslinguistic experimental evidence). Consider, for instance, the following Italian sentences:

- (6) a. Gianni, **Pietro** ha presentato a Maria.  
 John Peter has introduced to Mary  
 ‘As for John, he introduced Peter to Mary.’  
 b. #No, le ha presentato anche Stefano.  
 no to-her has introduced also Steve  
 ‘No, he also introduced Steve to her.’

The exhaustive identification of a fronted focus (6a) cannot be denied by an interlocutor (6b) because no exhaustivity emerges in the first place. These examples then show that Italian FF is not inherently exhaustive (see Frascarelli 2000, Brunetti 2004).

There is therefore consensus that Hungarian FF is exhaustive, in the sense that it expresses both the identification of the focus value from a set of alternatives and the simultaneous exclusion of other members of the same salient set of alternatives which are identifiable or highly predictable from the context and for which the predicate can potentially hold (see also Kenesei 1986; 2006; Horvath 1986; 2000). At the same time, however, a tension exists between the different hypotheses that have been formulated on the source of the exhaustive interpretation. On the one hand, exhaustivity has been analysed as the interpretive import of a semantic device, either an exhaustive operator or a semantic presupposition, defending the idea that the immediately pre-verbal focus in Hungarian is semantically exhaustive and, thus, that exhaustivity is part of the truth conditions of the corresponding sentences. On the other hand, other approaches reject the semantic nature of the exhaustivity associated with FF and claim that such an interpretive effect simply results from a pragmatic effect or inference. These approaches are reviewed in the following sections.

## 2.1 The semantic approach

Proponents of the semantic approach maintain that the exhaustivity of Hungarian FF is semantic in nature. Different implementations of this idea have been proposed, but we can identify three main analyses: the exhaustive focus operator, the exhaustive identification operator, and the semantic presupposition.

According to the first analysis, the focal constituent is itself the operator endowed with an [+exhaustive] feature (Szabolcsi 1981, É. Kiss 1998). The syntactic movement of the focus constituent into Spec/FP is indeed an instance of operator movement, which leaves a variable trace behind, in the argument position (Horvath 1986, 1995, Brody 1990, 1995, Rizzi 1997, É. Kiss 1998, 2002). The value of exhaustive identification always corresponds to the denotation of the constituent in Spec/FP, while the scope of focus – and hence, the scope of exhaustive identification – is its c-command domain.

Horvath (2007; 2010) attributes the exhaustivity to the presence of a (phonologically null) exhaustive identification operator which requires association with focus, but is in fact independent from FF. She refuses the postulation of a syntactically encoded focus feature and of the corresponding projection, stating that FF is instead triggered by interface-driven requirements (see also Surányi 2011, Brody & Szendrői 2011).<sup>2</sup>

2. See Szendrői (2001; 2003; 2017) for a stress-based approach to FF, according to which it is the prosodic requirements of an utterance, and, in particular, the stress-focus correspondence (cf. Reinhart 1995, Neeleman & Reinhart 1998) that determine

According to these two variants of the exhaustive operator analysis, therefore, exhaustivity is asserted and has a direct impact on the truth conditions of the sentence.

Another line of investigation treats exhaustivity as the result of a semantic presupposition, proposing that FF utterances come with the existential presupposition that the remnant clause (i.e. the background) is true, and that the focus identifies the maximal set for which the predicate expressed by the background holds (Kenesei 1986, Szabolcsi 1994, Bende-Farkas 2009, É. Kiss 2006, 2010; see also Kálman & Leusen 1993 for the idea of a contextually-triggered presupposition). This approach, in particular, has been recently revived and redefined by É. Kiss (2006, 2010, 2012). She first highlights the theoretical and empirical problems raised by her previous analysis, according to which the exhaustivity of structural focus is attributed to its [+exhaustive] feature checked against the matching feature of the F head in FP. As an alternative account, É. Kiss proposes that the exhaustivity arises as a semantic consequence of the specificational predicate role of focus. FF is triggered by the need of forming a syntactic predication structure between the focus and the background, marking the background as [+presupposed]. É. Kiss (2012), in particular, discusses Hungarian constructions in which the feature [+exhaustive] on the fronted focus seems redundant or irrelevant, and it thus unlikely to be the actual trigger of FF. See also Pintér (2017) for evidence from acquisition in support of this view.

Despite the substantial differences, all these analyses share the core assumption that Hungarian fronted foci are semantically exhaustive.

## 2.2 The pragmatic approach

The semantic source of Hungarian FF is challenged in a series of studies that rather defend the view that exhaustivity results from a pragmatic effect or inference. Wedgwood (2003; 2005; 2007) explicitly argues against the [+exhaustive] feature of the Hungarian fronted focus, claiming that the exhaustivity that often associates with foci, not only in Hungarian but also in other languages such as English, is merely pragmatic in nature. In particular, Wedgwood shows that in some cases an exhaustive interpretation is unnecessary or even conflicting with the context or with other elements in the sentence (see also Wedgwood, Pethő & Cann 2006). In (7), for instance, if the preverbal focus were to be interpreted as semantically exhaustive, it should be incompatible and, in fact, in contradiction with a phrase such as *többek között* ‘among others’, which is apparently not:

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the focus of the sentence, including FF.



(7) Peter többek között **Marit** csókolta meg.

Peter among others Mary.ACC kiss.PST.3SG VM

‘Peter kissed Mary, among others.’

(Onea & Beaver 2011, building on Wedgwood et al. 2006)

Wedgwood’s analysis is couched within the framework of Relevance Theory and does not provide a specific definition of the kind of pragmatic inference at the origins of the exhaustivity, even though we might assume that this would correspond to a conversational implicature. From a neo-Gricean perspective, and on the basis of experimental evidence, Onea (2007; 2009) and Onea & Beaver (2011) make a similar claim and present several arguments against a semantic solution.<sup>3</sup> They do not deny that an exhaustive interpretation is robustly associated with the immediately preverbal position in Hungarian, but argue that its source is rather a pragmatic implicature, which obtains because of the grammatical association between the preverbal focus position and the answering constituent to the question under discussion, as well as because of the pragmatic tendency to interpret answers to questions exhaustively (see also Balogh 2013).

Proponents of the pragmatic approach share the view that Hungarian exhaustivity is tightly linked to the question-answer context. In particular, Onea & Beaver (2011: §3.4) suggest that:

(i) The exhaustiveness inference arises pragmatically from an association between the pre-verbal focus position in Hungarian and the answering constituent for a wh-question under discussion, in the sense of Roberts (1996) and Beaver and Clark (2008).

(ii) Immediately preverbal focus in Hungarian is always the answering constituent to a (possibly implicit) question under discussion.

On the basis of the pragmatic observation that answers to questions are generally interpreted as complete answers, they treat the immediately preverbal focus as a grammatically-constrained question-answering

3. See É. Kiss (2010) for a refutation of most of these arguments in defence of a semantic determination of the exhaustivity of the Hungarian pre-verbal focus (see also Horvath 2000; 2005). It is worth noting that, in this paper, É. Kiss takes the exhaustive interpretation (i.e. “exactly *n*”) of a scalar element *n* in the preverbal focus position, which is otherwise interpreted as “at least *n*” out of focus, as evidence in support of the exhaustivity of the fronted focus. This implicature cancellation, however, seems to be a general property of focalized scalar elements, also in other languages (see Mayol & Castroviejo 2013).

constituent.<sup>4</sup>

Following Onea & Beaver (2011), within the pragmatic approach to FF in Hungarian, all experiments adopt question-answer pairs. Even when an explicit question is not used, the accommodation of an implicit question under discussion is assumed. Gerőcs, Babarczy & Surányi (2014: 191) share the hypothesis that “the immediately pre-verbal position in Hungarian grammatically marks a question-answering constituent”. However, since the pragmatic implicature is associated with a specific linguistic structure, namely FF and particle-verb inversion, they conclude that it would be more appropriate to treat the exhaustivity of the preverbal focus as a conventional implicature rather than a conversational implicature.<sup>5</sup>

Exponents of the semantic approach too consider the question-answer context to be the source of exhaustivity. Brody & Szendrői (2011), for instance, contend that exhaustive preverbal foci are complete answers to corresponding (either explicit or implicit) *wh*-questions. In their account, however, the grammaticalized semantic and syntactic relation – *wh*-phrases also occupy a preverbal position– between the question and the answer is realized by the presence of the exhaustive operator in both constructions (see also Horvath 2000; 2013, for a similar claim).

### 3 The non-exhaustive meanings of FF

Most of the recent studies on Hungarian FF, with the exception of Horvath (2010; 2013), seem to share the view that the semantic approach to exhaustivity as part of the assertion is too strong and should be weakened either to a semantic presupposition (É. Kiss 2006, 2010, 2012) or to a pragmatic implicature (Onea & Beaver 2011, Balogh 2013, Gerőcs, Babarczy & Surányi 2014). In particular, the pragmatic approach has highlighted, on the basis of both pragmatic considerations and experimental results, that exhaustivity cannot be due to a covert exhaustive operator and part of the truth-conditional meaning. Work on acquisition also provides counterevidence against the hypothesis that FF exhaustivity is asserted. Looking at the exhaustive interpretation of FF across varied sentence and context types and across different age groups of speak-

4. Onea & Beaver (2011) also discuss the role of particle inversion in answers to questions featuring FF. According to their findings, the contribution of the aspectual particles to the exhaustive interpretation seems to be significant, even though their role is not entirely clear. They noticed that when a verbal modifier was present in the sentence, the exhaustivity effect was higher than in sentences without such a particle. I refer to their work for more details.

5. On the controversial issue of whether conventional implicatures should be treated as semantic or pragmatic meanings, see Section 5.

ers, Kas & Lukács (2013) report experimental evidence against a strong semantic approach and conclude that other factors must be taken into account to explain the observed patterns. However, they do not unquestionably defend the pragmatic account as the only viable solution, rather stating that the “semantic presupposition and pragmatic implicature hypotheses are lending themselves as possible candidates, since both are concerned with the role of context and the latter with listeners’ inferences” (Kas & Lukács 2013: 242) (see also Pintér 2017).

Most arguments against the semantic approach come from a direct comparison with sentences containing the exhaustive operator *only* and mainly focus in question-answer contexts. As mentioned in the introduction, in this paper I defend an analysis of exhaustivity as a conventional implicature. In this section, I provide evidence against the semantic exhaustive operator approach by looking at contexts other than answers to questions, where no exhaustivity arises in combination with FF. Before moving to the Hungarian data, however, I first discuss the meanings that can be associated with FF in Italian, presenting a recent account that analyses these meanings as conventional implicatures.

### 3.1 FF and its implicatures in Italian

Unlike Hungarian, Italian FF does not express exhaustive identification (see Frascarelli 2000, Brunetti 2004). This explains why a statement rejecting the possible exhaustive identification associated with FF is felicitous in Hungarian (8) (see also § 2, ex. (4)), but not in Italian (9). For the exchange to work in Italian, the exhaustive operator *only* must be overtly added to the sentence (10):

- (8) a. Mari EGY KALAPOT nézett ki magának.  
       Mary a hat.ACC pick.PST.3SG VM herself.DAT  
       ‘It was a hat that Mary picked for herself.’  
       b. Nem, egy kabátot is ki nézett.  
       no a coat.ACC too VM pick.PST.3SG  
       ‘No, she picked a coat, too.’ (É. Kiss 1998: 251)
- (9) a. UN CAPPELLO ha comprato Maria.  
       a hat has bought Maria  
       ‘It is a hat that Maria bought’  
       b. #No, ha comprato anche un cappotto.  
       no has bought too a hat  
       ‘No, she bought a coat too.’ (Brunetti 2004: 65)

- (10) a. Maria ha comprato solo un cappello.  
 Maria has bought only a hat  
 ‘Maria bought only a hat.’  
 b. No, ha comprato anche un cappotto.  
 no has bought also a coat  
 ‘No, she bought a coat too.’ (Brunetti 2004: 65–66)

Which are then the main functions of FF in Italian? There has long been a consensus view that FF has a contrastive or corrective import (Rizzi 1997, Frascarelli 2000, Belletti 2004, Bianchi & Bocci 2012). Contrastive focus signals that there is just one alternative present in the discourse, namely, the alternative being corrected (11): this is the reason why the term ‘corrective focus’ is preferred in Bianchi & Bocci (2012) and in BBC (2015; 2016):

- (11) a. Hanno invitato Marina.  
 have.3PL invited Marina  
 ‘They invited Marina.’  
 b. GIULIA hanno invitato, (non Marina).  
 Julie have.3PL invited, (not Marina).  
 ‘They invited Julie, not Marina.’

As exemplified in (11), corrective focus performs a contrast – in fact, a correction – between the focus value of the asserted proposition (i.e. the corrective claim) and an explicit focal alternative that comes from a previous speech act (i.e. the corrected antecedent).

More recently, a further interpretation of FF in Italian has been described and investigated: the mirative import (Cruschina 2012, Bianchi 2015, BBC 2015; 2016).<sup>6</sup> Mirative focus relates to new information that is particularly surprising or unexpected, as in (12) and (13):

- (12) Sapessi che sorpresa! **Un anello di diamanti** mi  
 know.COND.2SG what surprise a ring of diamonds to-me  
 ha regalato!  
 has given  
 ‘What a surprise! He gave me *a diamond ring*!’  
 (13) Ti rendi conto! **Uno schiaffo** mi ha dato!  
 REFL realize.2SG a slap to-me has given  
 ‘Can you believe it?! He gave me *a slap*!’

6. Cruschina (2012) borrows the term from linguistic typology, see DeLancey (1997; 2001)) and Aikhenvald (2012).

It is in particular the mirative case that leads BBC to adopt a definition of focus that sets apart the semantic generation of a set of alternatives from the information status (new vs. given) of the focus and of the background. In a sentence with narrow focus, as in the case of FF structures, focus evokes a set of alternatives that share the same background (Rooth 1992, Krifka 2007), where the background is not necessarily given. If we look at the examples in (12) and in (13), we can observe that mirative FF can occur in out-of-the-blue contexts, where there is no salient alternative in the context and the post-focal material is thus clearly not given.<sup>7</sup>

What is the function of the focus structure then? In BBC's (2015; 2016) account, the meanings associated with FF in Italian are analysed as conventional implicatures that need a set of alternatives, and therefore a focus structure, in order to be interpreted correctly (see also Frey 2010 on A'-movement in German). In other words, it is the conventional implicature itself that triggers FF. The corrective and the mirative implicatures are defined as follows:

(14) *Corrective implicature:*

There is one focus alternative proposition, already introduced in the context, which is incompatible with the proposition expressed in the corrective reply.

(15) *Mirative implicature:*

There is at least one focus alternative proposition which is *more likely* than the asserted proposition with respect to a contextually relevant modal base and a stereotypical ordering source.

Syntactically, the trigger of FF is the conventional implicature itself. BBC (2015) offers a cartographic implementation of this idea, proposing that the corrective or the mirative implicatures are triggered by a syntactic feature which, in compliance with the T-model of the grammar, has a direct impact on both the semantics and the prosody of the sentence. A dedicated functional projection, labelled FAI (focus-associated implicature), hosts these implicature-triggering features. The different interpretations associated with focus are therefore conventionally associated with the activation of this left-peripheral functional projection which in turns requires a focus structure (i.e. a set of alternatives) in

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7. This is different with corrective focus, where the post-focal material is in fact given. In order to account for both cases, however (corrective focus and mirative focus), we have to acknowledge that the *givenness* of the post-focal material is a sufficient but not a necessary condition for FF (see BBC 2015; 2016 for more details on this point). On FF in contexts that would in fact require broad focus (e.g. out of the blue), see Zimmermann (2007) and Fanselow & Lenertová (2011).

the scope of the implicature trigger, yielding syntactic movement of the focus to FocP, as shown in (16):

(16) [<sub>FP</sub> Force ... [<sub>FaIP</sub> FAI<sup>o</sup><sub>[mir]/[corr]</sub> [<sub>FocP</sub> YP<sub>i</sub> [<sub>+</sub>foc] Foc<sup>o</sup><sub>[+foc]</sub>... [<sub>TP</sub> ... <YP<sub>i</sub> > ... ]]]

Interestingly, the conclusion that the meanings associated with FF are implicatures bears a likeness to the recent studies on Hungarian FF that analyse exhaustivity as an implicature. It is important to emphasize, however, that BBC arrive at this claim from a different perspective. Firstly, in their account, the corrective and the mirative implicatures are defined as conventional implicatures in the sense of Potts (2005; 2007; 2011), inasmuch as they are non-cancellable meanings that do not derive from the at-issue, asserted content of a proposition but that are conventionally associated with a specific linguistic structure. Secondly, even if different contexts support either implicature, whether the implicature is corrective or mirative does not depend on the context or on pragmatic conditions; the two implicatures are rather grammaticalized, in the sense that they are associated with distinct grammatical properties. BBC (2015; 2016) show that in Italian, in fact, the corrective and the mirative implicature are marked by distinct prosodic contours.

In light of this analysis, the question to be addressed with respect to Hungarian FF is the following: Is Hungarian FF always exhaustive in all contexts? Or, to put it differently, is exhaustivity a necessary condition for Hungarian FF? I believe that an answer to this question may shed light on the source and on the nature of the exhaustive interpretation.

### 3.2 Hungarian FF in contexts other than answers

Be it the result of a semantic or a pragmatic process, Hungarian fronted focus appears to be interpreted as exhaustive in answers to wh-questions. However, not all fronted foci are answers. In order to determine whether the exhaustive interpretation, typical of question-answer pairs, is an interpretive constant of FF, we should test FF in contexts that, presumably, do not require exhaustivity, not even from a pragmatic or conversational viewpoint. To this end, and based on previous research on FF in Italian (BBC 2015; 2016; Bianchi & Cruschina 2016), I administered a questionnaire to Hungarian native speakers specifically testing three types of context that license FF but that are not answers to questions:<sup>8</sup>

8. Unless otherwise indicated, the following Hungarian examples and the relative judgements come from a questionnaire that I administered to 22 native speakers (both linguists and non-linguists). I greatly thank András Bárány and Vera Hegedűs for help and assistance with the questionnaire, as well as all the informants who answered the questions. Any misuse or misunderstanding of the data is, of course, my own responsibility.

- a) FF in corrective contexts;
- b) FF in mirative contexts;
- c) FF in polar questions.

These contexts are not necessarily associated with an exhaustive interpretation, so the acceptability of FF in such environments proves that exhaustivity is not a necessary condition for FF, but rather the result of a conventional implicature, namely, a grammaticalized association between a linguistic form and a special interpretive import. If an exhaustive implicature has been conventionalized in answers to *wh*-questions (see Brody & Szendrői 2011, Gerőcs, Babarczy & Surányi 2014), and from there it has then probably been expanded to other contexts, other conventional implicatures are associated with Hungarian FF under different contextual conditions.

### 3.2.1 Corrective contexts

Hungarian FF can have a corrective function (see Brody & Szendrői 2011). Corrective FF, as exemplified in (17) and (18), was judged as fully grammatical by all participants of the questionnaire:

- (17) Context: Anna and Beatrice talk about Lea, Gianni and their recent wedding

- a. Ha jól értettem, a Virgin-szigetekre  
if correctly understand.PST.1SG the Virgin-Islands.to  
mentek nászútra.  
go.PST.3PL honeymoon.to  
'If I've understood correctly, they went to the Virgin Islands on honeymoon'.
- b. Nem, tévedsz! A MALDÍV-SZIGETEKRE mentek  
no be.wrong.2SG the Maldives.to go.PST.3PL  
nászútra, nem a Virgin-szigetekre.  
honeymoon.to not the Virgin-Islands.to  
'No, you are wrong! *To the Maldives* they went on honeymoon, not to the Virgin Islands!'

- (18) Context: Claudia and Bruno talk about the presents Maria got for her graduation

- a. A szülei egy gyémantgyűrűt adtak  
the parent.POSS:PL.3SG a diamond.ring.ACC give.PST.3PL  
neki.  
to.her  
'Her parents gave her a diamond ring'.

- b. Nem, tévedsz! EGY KARNEOL NYAKLÁNCOT  
 no be.wrong.2SG a carnelian necklace.ACC  
 adtak neki, nem egy gyémántgyűrűt.  
 give.PST.3PL to.her not a diamond.ring.ACC  
 ‘You are wrong! A *carnelian necklace* they gave her, not a diamond ring!’

The question that we need to address is the following: Is corrective focus exhaustive? This seems to be a rather moot point. On the one hand, if we consider that in this context the set of focal alternatives only includes the corrective claim and the antecedent proposition (i.e. the target of the correction) (cf. Leusen 2004; Bianchi & Bocci 2012), we are led to a positive answer to our question: corrective focus is exhaustive, insofar as the narrow focus in the corrective claim identifies a single alternative to the exclusion of the other. On the other hand, assuming that the focus operator always acts on a contextually salient subset of the general set of alternatives generated by the focus (Rooth 1992), a larger subset could be introduced in the context, so that the correction denies the truth of the antecedent proposition but, crucially, does not necessarily exclude other potential alternatives. A similar context with an anti-exhaustive corrective focus is set up in (19), where the set of grandma’s jewellery is introduced in the first sentence:

- (19) a. Mari kapott egy ezüst nyakláncot nagymama  
 Mari got a silver necklace.ACC grandma  
 ékszerei közül.  
 jewellery.POSS:PL.3SG among  
 ‘Mary got a silver necklace of grandma’s jewellery’.
- b. Tévedsz! EGY ARANY NYAKLÁNCOT kapott (nem  
 be-wrong.2SG a gold necklace.ACC got not  
 ezüstöt), és ezen kívül még egy pár fülbevalót.  
 silver.ACC and this-on apart also a pair earring.ACC  
 ‘You are wrong! A *golden necklace* she got (not a silver one), and in addition to that a pair of earrings.’

As evident from speaker B’s reply, the corrective fronted focus need not be exhaustive and an additional member of the set of the grandma’s jewellery for which the predicate holds can be felicitously mentioned in the continuation to the sentence with FF.

### 3.2.2 Mirative contexts

Mirativity, namely, the expression of surprise and unexpectedness, is another interpretation that is commonly associated with FF (cf. § 3.1).



Crucially, mirative focus is possible in contexts that neither require a semantic exhaustive import nor motivate an exhaustive inference. In fact, mirative focus is possible in out-of-the-blue contexts. É. Kiss (2007: 78) discusses Hungarian examples in which the same FF construction can be used to answer a question eliciting an all-focus structure:

- (20) a. MELYIK CSAPAT nyerte meg a világbajnokságot?  
 which team win.PST.3SG VM the world.cup.ACC  
 ‘Which team won the world cup?’
- b. AZ OLASZ CSAPAT (nyerte meg a világbajnokságot).  
 the Italian team (win.PST.3SG VM the world.cup.ACC)  
 ‘The Italian team (won the world cup).’
- (21) a. Mi történt?  
 what happen.PST  
 ‘What happened?’
- b. AZ OLASZ CSAPAT nyerte meg a világbajnokságot!  
 the Italian team win.PST.3SG VM the world.cup.ACC  
 ‘The Italian team won the world cup!’

Can (21b) have a mirative interpretation? First of all, notice that É. Kiss (2007: 78) added an exclamation mark at the end of this sentence, which is instead absent in (20b). Whether the answer in (21b) has an import of surprise or unexpectedness was directly asked in the questionnaire, where the participants had to comment on the naturalness for the same speaker to continue the FF-sentence with additions such as *bár ezen nem lepődöm meg...* ‘but that doesn’t surprise me...’ or *de nincs abban semmi furcsa* ‘but there’s nothing strange about it...’. Such continuations would in fact be inconsistent with the mirative implicature associated with the FF-sentence, leading to pragmatic infelicity. Conversational implicatures are speaker’s commitments that cannot be cancelled by the speaker, contrary to conversational implicatures (see Potts 2005, 2007). For this reason, a cancellation aiming at contradicting or denying the mirative import of surprise is expected to give rise to an odd pragmatic result (see also Frey 2010: 1426, BBC 2015). Indeed, these continuations were judged as odd by the participants to the questionnaire, one of which explicitly and effectively stated: “B’s reply implies that it is a surprise that the Italian team won, so it’s weird to negate that in the continuation”. Further examples from the questionnaire are reported in (22)–(25):

- (22) Context: Anna and Beatrice talk about Lea, Gianni and their recent wedding

Azt hittem, hogy nincs pénzük!  
 that.ACC think.PST.1SG that not.be money.POSS.3PL  
 Képzeld! A MALDÍV-SZIGETEKRE  
 imagine.IMP.2SG the Maldives.to  
 utaztak el nászútra!  
 travel.PST.3PL VM honeymoon.to  
 ‘I thought they were penniless! Guess what! *To the Maldives* they went on honeymoon!’

Continuation 1:

... # bár ezen nem lepődöm meg...  
 although this not be.surprised.1SG VM  
 ‘but that doesn’t surprise me...’

Continuation 2:

... és még a Seychelle-szigetekre is (elutaztak)!  
 and even the Seychelles.to too (VM.travel.PST.3PL)  
 ‘and to the Seychelles too (they went)!’

- (23) Context: Anna tells about a customer who complained for nothing

Képzeld! AZ IGAZGATÓVAL akart beszélni!  
 imagine.IMP.2SG the headmaster.with want.PST.3SG talk.INF  
 ‘Guess what! *To the headmaster* he wanted to talk!’

Continuation 1:

... # bár ezen nem lepődöm meg...  
 although this not be.surprised.1SG VM  
 ‘but that doesn’t surprise me...’

Continuation 2:

... # de nincs abban semmi furcsa...  
 but not.be that.in nothing strange  
 ‘but there’s nothing strange about it...’

- (24) Context: Two friends talking about the previous night

Nem hiszem el! KÉT ÜVEG BORT ittunk meg!  
 not believe.1SG VM two bottle wine.ACC drink.PST.1PL VM  
 ‘I can’t believe it! *Two bottles of wine* we drank!’

Continuation 1:

... # bár ezen nem lepődöm meg...  
 although this not be.surprised.1SG VM  
 ‘but that doesn’t surprise me...’

Continuation 2:

... és még három doboz sört is (ittunk)!  
 and even three can beer.ACC too (drink.PST.1PL)  
 ‘and three cans of beer too (we drank)!’

- (25) a János nagyon szereti Marit. Képzeld! EGY  
 John very.much love.3SG Mary.ACC imagine.IMP.2SG a  
 GYÉMÁNTGYŰRŰT adott neki!  
 diamond.ring.ACC give.PST.3SG to.her  
 ‘John is madly in love with Mary. Guess what! A *diamond ring* he gave her!’

Continuation 1:

... # de nincs ebben semmi furcsa...  
 but not.be this.in nothing strange  
 ‘but there’s nothing strange about it...’

Continuation 2:

... és még egy karkötőt is (adott neki)!  
 and even a bracelet.ACC too (give.PST.3SG to.her)  
 ‘and a bracelet too (he gave her)!’

In these contexts, besides the continuation testing for cancellation (cf. Continuation 1), a second possible continuation was included in order to determine whether the mirative implicature could be defined as a concomitant effect of an otherwise consistently exhaustive fronted focus. The addition in Continuation 2 would in fact rule out the exhaustive interpretation. As expected, while Continuation 1 was judged as odd, Continuation 2 was considered natural by most speakers.<sup>9</sup>

Moreover, it is certainly worth noting that in mirative contexts, such as those in (22–25), clefts cannot be used (cf. e.g. (26) and (27)):

- (26) #A MALDÍV-SZIGETEK volt az, ahova nászutra  
 the Maldives is.PST.3SG that where honeymoon.to  
 utaztak!  
 travel.PST.3PL  
 ‘It was *to the Maldives* that they went on honeymoon!’

- (27) #AZ IGAZGATÓ volt az, akivel beszélni akart!  
 the headmaster is.PST.3SG that who.with talk.INF want.PST.3SG  
 ‘It was *the headmaster* that they wanted to talk to!’

Due to their exhaustive nature, clefts are generally considered to convey the same exhaustive interpretation as fronted foci in Hungarian

9. Judgements were not always clear-cut. In a few cases the continuation denying the surprise was judged as possible. Care is in fact needed in interpreting the value of continuations of this type: they are distinct speech acts and may describe a change of commitment on the part of the speaker (this clearly happens when the ‘contradictory’ continuation is somehow motivated or introduced by ‘but’ or ‘although’). Two speakers pointed out that Cont. 2 in (22) seems to imply that the second destination was not part of the honeymoon.

(É. Kiss 1998). The impossibility of using a cleft with a mirative interpretation (not even in other languages such as English or Italian) clearly shows that, at least in these contexts, FF is not functionally equivalent to clefts, as we would expect if FF's only import were exhaustivity (on the relationship between Hungarian FF and clefts, see also Wedgwood, Pethő & Cann 2006, and Wedgwood 2007).

As already discussed (cf. § 3.1), the at-issue assertion featuring FF simultaneously conveys an additional meaning (i.e. the mirative implicature) which belongs to a different, non-at-issue dimension of meaning. An interlocutor can thus challenge either the at-issue or the non-at-issue content of a sentence with a (mirative) conventional implicature. In (28), speaker B rejects the at-issue content of the previous assertion, denying its truth, while in (29) and in (30) she accepts the at-issue content but objects to the non-at-issue implicature:

- (28) a. Képzeld! (EGY) GYÉMÁNTGYŰRŰT adott  
 imagine.IMP.2SG (a) diamond.ring.ACC give.PST.3SG  
 neki!  
 to.her  
 'Guess what! A *diamond ring* he gave her!'
- b. Nem igaz! Ki mondott ilyen hülyeséget?  
 not true who say.PST.3SG such absurd.thing.ACC  
 'You're wrong! Who told you this absurd thing?'
- (29) a. Képzeld! (EGY) GYÉMÁNTGYŰRŰT adott  
 imagine.IMP.2SG (a) diamond.ring.ACC give.PST.3SG  
 neki!  
 to.her  
 'Guess what! A *diamond ring* he gave her!'
- b. Nincs ebben semmi furcsa.  
 not.be this.in nothing strange  
 'There's nothing strange about this.'
- (30) a. Képzeld el! TETKÓT csináltatott (a  
 imagine.IMP.2SG VM tattoo.ACC have.made.PST.3SG (the  
 vállára)!  
 sholder.POSS.to)  
 'Guess what! A *tattoo* he had made/he got (on his shoulder)!'
- b. Én is. Nincs ebben semmi furcsa.  
 I too not.be this.in nothing strange  
 'Me too. There's nothing strange about this.'

These examples show that the propositional content of the sentence with mirative FF and its mirative implicature are part of two independent dimensions of meaning (see BBC 2016: 18–19). The mirative implicature, in particular, appears to be bound to the syntactic movement operation of FF. By contrast, no exhaustive meaning emerges in these contexts.

### 3.2.3 Polar questions

Bianchi & Cruschina (2016) examines the semantic contribution of FF in polar questions in Italian and Sicilian. In Italian and Sicilian nuclear polar questions with a fronted narrow focus, FF contributes non-at-issue content (i.e. a mirative conventional implicature or a presupposition) which exploits the focus structure (i.e. the set of alternatives). These non-at-issue meanings are not sensitive to the question operator and do not affect the question denotation. What is suspended is the truth value of the proposition; the speaker is nonetheless committed to the non-at-issue meaning associated with FF which thus does not fall under the scope of the interrogative operator.

A typical non-at-issue meaning associated with FF in polar questions is the mirative implicature. Being a conventional implicature, the mirative import of surprise cannot be cancelled by the speaker, as shown in (31):

(31) a Chi **a Maria** salutasti? (Sicilian)

PTC ACC Mary  
'Did you greet *Mary*?'

Continuation 1:

... Pinsava ca jirivu sciarriati.  
think.PST.1SG that are.PST.2PL fight.PST.PTCP.M.PL  
'I thought you had a row.'

Continuation 2:

# ... Propia cumu pinsava.  
exactly like think.PST.1SG  
'Exactly as I would have thought.'

(Bianchi & Cruschina 2016: 61)

What is important to our purposes is the interpretation that is hardly compatible with exhaustivity, i.e. the mirative meaning. Indeed, Hungarian too allows for a mirative interpretation of polar questions with FF, which conveys the non-at-issue meaning that one focus alternative proposition is *more likely* with respect to the common ground as it is at the point when the assertion is uttered:

- (32) a AZ OLASZ CSAPAT nyerte meg a világbajnokságot?  
 the Italian team win.PST.3SG VM the world.cup.ACC  
 ‘The Italian team won the world cup?’

Continuation 1:

Azt hittem, hogy elvesztették az utolsó két  
 that.ACC think.PST.1SG that VM.lose.PST.3PL the last two  
 meccset  
 match.ACC  
 ‘I thought they had lost the last two matches...’

Continuation 2:

# Ahogy gondoltam.  
 as think.PST.1SG  
 ‘As I thought.’

- (33) a. MARIT hívták meg?  
 Mary.ACC invite.PST.3PL VM  
 ‘Mary they invited?’  
 b. MARIT hívták meg? És Jánost is? Örület!  
 Mary.ACC invite.PST.3PL VM and John too oh.dear  
 ‘Mary they invited? And John too? Oh dear!!’

The conventional implicature nature of the mirative meaning is also confirmed for polar questions by the cancellation or denial test (cf. Continuation 2 in (32a)) and by possibility of mentioning other alternatives for which the predicates holds (33b).<sup>10</sup>

The surprise reading in (32) in (33a), however, is not the only available one. These questions can also be interpreted identificationally (Kenesei 1986, É. Kiss 1998, a.o.) and, presumably, with an exhaustive meaning of the fronted focus. Under this interpretation, the examples at issue can be rendered by a cleft question in English (i.e. *Is it the Italian*

10. The acceptability of the following alternative question was also tested:

- (i) MARIT hívták meg vagy MARIT ÉS JÁNOST  
 Mary.ACC invite.pst.3PL VM or Mary.ACC and John.ACC  
 (hívták meg)?  
 (invite.PST.3PL VM)?  
 ‘Mary they invited or Mary and John (they invited)?’

This question was judged as possible by most speakers, although some explicitly stated that it would be better with *csak* ‘only’. Such a result might be interpreted as supporting the exhaustivity of the fronted focus in the first disjunct (see the similar test in (2) above for declaratives). Note, however, that the exhaustive meaning in the first disjunct can be derived as a (conversational) implicature associated with the disjunction. A similar question would in fact be pragmatically felicitous even in a language such as in Italian, where FF is generally not associated with exhaustivity, as independently argued (cf. § 2, § 3.1).

*team that won the world cup? Is it Mary that they invited?*). Nevertheless, the possibility of interpreting these questions with a non-exhaustive mirative meaning shows that exhaustivity is not a necessary condition for FF not only in declarative clauses, but also in polar questions.

I finally wanted to determine how prominent the mirative interpretation is as opposed to the identificational reading, and if the identificational reading is necessarily exhaustive. To this end, participants were asked to choose the most appropriate translation of a number of polar questions with FF. Three alternative options were provided (in English): the first option conveys a mirative meaning by means of the surprise-expressing adverb *really*, the second translation was meant to render the identificational reading, while the third and last option contains the exhaustive adverb *only* (cf. 34–35):

- (34) a. Anna AZT A KÖNYVET olvasta el?  
 Anna that.ACC the book.ACC read.PST.3SG VM  
 ‘Anna *that* book read?’  
 b. Meaning 1: *Did Anna really read that book?*  
*Was it really that book that Anna read?*  
 c. Meaning 2: *Is it that book that Anna read?*  
 d. Meaning 3: *Is it only that book that Anna read?*
- (35) a. Márk SZICÍLIÁRA ment el?  
 Mark Sicily.to go.PST.3SG VM  
 ‘Mark *Sicily* visited?’  
 b. Meaning 1: *Did Mark really visit Sicily?*  
*Was it really Sicily that Mark visited?*  
 c. Meaning 2: *Is it Sicily that Mark visited?*  
 d. Meaning 3: *Is it only Sicily that Mark visited?*

Speakers found that Meaning 2 (*identificational*) is the most prominent. Meaning 1 (*mirative*) is also generally judged as possible with the appropriate prosodic contour and context, but crucially *Meaning 3* was barely chosen (only by three speakers, out of 22, who pointed out that it might be possible “depending on the context”). These findings lead to the conclusion that the more neutral identificational reading of polar questions in FF is not necessarily exhaustive (although I am not excluding that it might be under the appropriate pragmatic conditions). At any rate, even if one objects that the identificational function is *by default* exhaustive, mirative FF shows that other non-exhaustive interpretations are possible in polar questions.

## 4 Exhaustivity in answers to questions: A comparative perspective

The data reviewed and discussed in the previous section speak against a strong semantic approach to Hungarian FF based on the idea of an exhaustive operator. The same argumentation, however, would be fully compatible with a pragmatic approach and in particular with the hypothesis of exhaustivity as a conversational implicature: under this approach, it would indeed be natural to argue that the exhaustive interpretation does not arise outside of the question-answer contexts. In this section, I address exhaustivity in answers to questions from a crosslinguistic perspective: this discussion will bring in further evidence against the semantic (operator) approach and will also cast doubt on the pragmatic conversational implicature analysis. In the next section, instead, I will introduce a stronger argument against the latter analysis, namely, the fact that the implicature cannot be cancelled by the speaker.

Independently of the precise nature of the exhaustive effect, one may wonder if the recognized association between exhaustive foci and answers to *wh*-questions is a language-specific property of Hungarian. In what follows, I take into consideration three languages in which it is possible to answer to a *wh*-question either with *in situ* or with an *ex situ* (i.e. fronted) focus, in the attempt to see whether FF in answers to questions associate with exhaustivity. Unfortunately, not many studies on FF clarify this aspect, not even when it is acknowledged that both options are possible within one and the same language. At any rate, it is not my intention to provide a detailed crosslinguistic survey of this issue here, but I will simply discuss three languages for illustrative and comparative purposes. The three languages in question are Hausa (Chadic), Gungbe (Gbe), and Sicilian (Romance).

In Hausa, a focus constituent can either be fronted (*ex-situ* focus) or remain in its base-position (*in-situ* focus) (see Tuller 1986, Green 1997, Newman 2000, Jaggar 2001, Hartmann & Zimmermann 2007). A sentence containing a narrow focus can contain the particle *nee* (or its feminine form *cee*) (36A1). This particle is optional, but if present, it “has a semantic impact in form of a conventional implicature: it causes an exhaustive interpretation of the focus” (Hartmann & Zimmermann 2007: 241). It has been shown, however, that in answers to *wh*-questions, the unmarked *in-situ* strategy is more prominent (36A2), despite the fact that the *wh*-phrases in the questions are almost always fronted (36Q):

- (36) Q. *Mèè suká kaamàa?* (Hausa)  
           what 3PL.REL.PERF catch  
           ‘What did they catch?’



A1. *Kiifi* (*nèe*) *sukà* *kaamàa*.  
 fish PRT 3PL.REL.PERF catch  
 ‘They caught *fish*.’

A2. *Sun* *kaamà kiifi*.  
 3PL.ABS.PERF catch fish  
 ‘They caught *fish*.’ (Hartmann & Zimmermann 2007: 242–243)

This fact, together with the optionality of the focus-sensitive exhaustive maker *nee* with ex-situ focus lead Hartmann & Zimmermann (2007) to conclude that unlike Hungarian, Hausa does not structurally encode exhaustivity in answers to questions.

The in-situ and ex-situ strategies in answers to wh-questions are also possible in Gungbe. The interpretive difference between the two options seems to be that in-situ focus specializes for new information focus, while the ex-situ strategy is associated with exhaustive/identificational focus (Aboh 2004; 2007: 291–292):

- (37) a. *Été wè Kòfi dù?* (Gungbe)  
 what FOC Kofi eat  
 ‘What did Kofi eat?’  
 b. *É dù lésì*  
 3SG eat rice  
 ‘He ate rice.’  
 c. *Lésì wè é dù (bò bé àwútù)*  
 rice FOC 3SG eat and start sickness  
 ‘He ate *rice* (and became sick).’

According to Aboh, (37b) and (37c) are both felicitous replies to the question in (37a).<sup>11</sup> The answer in (37c) requires an appropriate context implying a contrast or requiring a continuation like ‘and he became sick’. From these facts, as well as from additional crosslinguistic evidence, Aboh (2007: 311) concludes that “there is no systematic correlation such that in question-answer pairs a wh-question will necessarily require a response including a focused constituent”. Most importantly, for our purposes, even if Gungbe has at its disposal a strategy to encode exhaustive foci (i.e. FF), this has not been grammaticalized or conventionalized in answers to questions. On the contrary, fronted foci are marked answers in that they require appropriate contextual conditions.

Let us now turn to Sicilian. On the one hand, on the basis of native speakers’ grammaticality judgements, in Cruschina (2006; 2010;

11. Both in Hausa and in Gungbe, focal subjects behave differently, in that only the ex-situ strategy is possible.

2012)) I argued that in this language a *wh*-question is mostly commonly answered with an *ex-situ* focus.<sup>12</sup> On the other, an experimental study, which investigated the degree of acceptability of different answering strategies in Sicilian (Cruschina 2015), showed that in answers to questions there is no (statistically) significant difference between the *ex-situ* and the *in-situ* strategy. Both types of focalization were accepted as equally good by native speakers. The alternative strategy with an *in-situ* focus is thus possible, raising the question of the interpretive difference between the two options. I initially attempted to describe this difference in terms of emphasis (Cruschina 2006, 2010), but the description of *ex-situ* foci as emphatic does not really explain much about their actual interpretation. What is worth noting is that, despite the apparent optionality, all speakers agree that if an answer is to be interpreted with an additional semantic or discourse reading (e.g. mirative), *ex-situ* focus becomes the preferred option.<sup>13</sup>

The additional semantic import may well be exhaustivity. As in Italian (cf. § 2, § 3.1), in Sicilian fronted foci are generally non-exhaustive (see Cruschina 2012: 78–79). In the appropriate context and with a marked intonational contour, however, certain answer-question contexts may give rise to a clear exhaustive interpretation:

- (38) a. Come on! Tell the truth! Who did you see yesterday in the park?  
 b. *Ìa a Maria vitti!*  
 I to.ACC Mary see.PST.1SG  
 ‘I (only) saw Mary.’
- (39) Context: *jealous husband talking to his wife*  
 a. What happened between you and Salvo?  
 b. *Salvo na vasata mi detti!*  
 Salvo a kiss to-me give.PST.3SG  
 ‘Salvo (only) gave me a kiss!’ (Cruschina 2012: 78)

12. The most common strategy to reply to a *wh*-question is in fact by means of the focus constituent in isolation. This holds true for most languages. If full sentences are considered, however, Sicilian clearly differs from Italian in that Italian does not readily accept FF in answers to questions (see Belletti 2004), unless an additional special interpretation (e.g. mirativity) is present (see Cruschina 2012).

13. Short interviews that followed up the experiment described in Cruschina (2015) confirmed this result. All answer-to-question sentences in the experiment, however, were designed in order to trigger a plain information focus in the answer. One may speculate that the acceptability of the *in-situ* strategy may in fact be the consequence of the constant influence on standard Italian on Sicilian. This is however difficult to establish with certainty. Note also that the *in-situ* strategy is potentially ambiguous because it would be syntactically and prosodically indistinguishable from broad focus (see for following footnote for similar facts in Hungarian).

Crucially, in these contexts, in-situ focus would yield an opposite effect to exhaustivity, namely, a sense of incomplete information.<sup>14</sup> This amounts to saying that, in Sicilian, exhaustivity is generally not an inherent feature of FF, but if backed up by the context and marked with a highly specific intonational contour, an exhaustive import may be associated with FF.

Summing up, in answers to questions FF can be associated with exhaustivity in Hausa, Gungbe and in Sicilian, but this is neither an inherent property nor a necessary condition. Thus, the exhaustive interpretation can only with difficulty be treated as the result of a semantic condition (e.g. a semantic exhaustive operator) that generally applies in the context of answers to questions. The possible but not obligatory exhaustive interpretation of FF in answers to questions in these languages is also at odds with a pragmatic approach based on the idea of a general pragmatic tendency to interpret answers to questions exhaustively. This tendency seems to be true of Hungarian, but not of other languages.

Exhaustive fronted foci appear thus to be a specific characteristic to Hungarian. In this language, the connection at issue has therefore been grammaticalized through a process of conventional association between a syntactic form and an interpretive import, giving rise to a conventional implicature. Starting from the question-answers, this association might have well be generalized also to other contexts.

## 5 The exhaustive implicature

In this section I provide further details on the exhaustive implicature as defined in the present account and, more specifically, I will argue in favour of the hypothesis that this has to be understood as a conventional, rather the conversational, implicature. As mentioned earlier, a semantic account of exhaustivity as part of the asserted at-issue content of a Hungarian utterance featuring FF is too strong because of the following reasons: (a) both in declarative sentences as well as in polar questions, fronted foci are not necessarily exhaustive – they need not be in mirative contexts, for instance (cf. § 3.2); (b) from a crosslinguistic perspective, it does not explain why the exhaustivity of fronted foci in

14. In Hungarian, an answer with in-situ focus (i.e. with an information focus in É. Kiss's 1998 distinction) is interpreted as incomplete and non-exhaustive. Some authors, however, consider only left peripheral ex-situ focus as natural and fully acceptable in answers to questions (cf. Horvath 1986; 1995; Puskás 2000; Szendrői 2003), either ignoring the in-situ option or else considering it as marginal or ungrammatical. Szendrői (2003: 64ff.) denies that in-situ information focus is an actual instance of narrow focus and argues that it in fact corresponds to VP-focus which shows the same prosodic features as unmarked, broad-focus sentences in Hungarian (Szendrői 2003: 64ff).

answers to questions is a language specific property of Hungarian (cf. § 4).

The language specific property of Hungarian with respect to exhaustivity of fronted foci in question-answer contexts is also problematic for the pragmatic approach that derives exhaustivity from a pragmatic inference or a conversational implicature, insofar as it would be inexplicable why only speakers of one language would be subject to the pragmatic factors that determines exhaustivity.

In the Section 3.2, we reviewed some evidence supporting the hypothesis that what characterizes Hungarian fronted foci is an exhaustive implicature, more specifically, an exhaustive conventional implicature in the sense of Potts (2005; 2007). Unlike conversational implicatures, conventional implicatures are part of the meaning of a word or, as in our case, of a construction but are not part of the at-issue truth conditions. Even if the term implicature is traditionally associated with the realm of pragmatics, it must be noted that, according to Potts, conventional implicatures are fully semantic, not pragmatic meanings, even though they pertain to a separate non-at-issue dimension which is independent from the at-issue content. The question arises of whether it makes sense at all to postulate such a distinction in the case of conventionalized meanings. This issue is clearly addressed in Beaver & Clark (2008), who state that the “division between semantics and pragmatics (if it can be made at all) is orthogonal to the division between conventionalized and non-conventionalized meaning. [In some cases,] focus sensitivity crucially involves conventionalized pragmatics” (see also Gutzmann 2014).

Following a number of studies, I have argued in favour of the obligatory nature of the exhaustive implicature in the appropriate contexts (e.g. answers to questions) (see also Balogh 2013’s analysis of this implicature as an obligatory pragmatic implicature, in the sense of Chierchia 2014).<sup>15</sup> However, an important question remains to be addressed: What is the evidence in favour of the non-at-issue nature of this conventional implicature? This is probably the most contentious aspect of the exhaustive import, inasmuch as judgements seem to be difficult and controversial. A characteristic property of conventional implicatures is that, being speaker’s commitments, they cannot be cancelled or denied by the speaker herself. This seems to be confirmed by a typical test that is often used to argue that sentences with FF in Hungarian cannot be continued with an additive particle that would contradict the exhaustivity of the focus (the example is from Balogh 2013: 7):

15. The semantic nature of conventional implicatures is able to explain the outcome of the entailment and the negation test discussed in Section 2 (cf. (2)–(3) and (4)–(5), respectively).

- (40) Amy BENT hívta fel tegnap. #És CLEOT is.  
 Amy Ben.ACC call.PST.3SG VM yesterday and Cleo.ACC too.  
 'It is Ben whom Amy called yesterday. #And Cleo, too.'

The non-cancellability of the exhaustive implicature by the speaker proves its conventional nature. Recall, however, that even if this is the implicature mostly commonly associated with FF in Hungarian in answers to question and, by extension, in other contexts, it is in complementary distribution with other implicatures such as the mirative implicature (cf. § 3.2.2).

Let us now turn to the grammatical association between the exhaustive implicature and FF, which is fully justified on semantic grounds within the present account (*pace* Horvath's 2007; 2010; 2013 denial of a connection between focus and movement): in order for the fronted focus to be properly interpreted as exhaustive, it must have a focus structure inside its syntactic scope. In other words, the focus value of the asserted proposition exhaustively identifies a member (or a subset) of a contextually salient set of focus alternative propositions.

The mirative and the corrective implicatures too can only be interpreted on the basis of a focus structure (see BBC 2015; 2016). This leads us to the conclusion that exhaustivity is just a member of an array of possible focus-associated implicatures that may be conventionalized in the grammar of a specific language. As we saw, not all implicatures are conventionally associated with a given context or construction in all languages, even if the interpretation that leads to that specific meaning would be pragmatically motivated. In particular, the exhaustive implicature seems to have only been grammaticalized in Hungarian.

If we want to extend BBC's cartographic account of focus-associated conventional implicatures to the Hungarian exhaustive implicature, we simply need to add the syntactic implicature-triggering feature [exh] to the set of possible features that can head FAI<sup>o</sup>, as shown in (41):

- (41) [<sub>FP</sub> Force ... [<sub>FaiP</sub> FAI<sup>o</sup><sub>[mir]/[corr]/[exh]</sub> [<sub>FocP</sub> YP<sub>i</sub> [+foc] Foc<sup>o</sup><sub>[+foc]</sub> ... [<sub>TP</sub> ... <YP<sub>i</sub> > ... ]]]

In the appropriate context, e.g. in answers to questions, this feature activates the left-peripheral functional projection which in turn needs a focus structure in its scope. In compliance with the cartographic tenets, the [exh] feature triggers syntactic movement and has a direct impact at the interfaces: it generates the relevant implicature at the semantic level and determines the specific prosodic contour the phonological level. Under this account, it is essential that the different implicatures are characterized by different grammatical properties, so as to prove that they

are not simply pragmatic variants of the same implicature. The prosodic differences between corrective and mirative focus have been discussed, on the basis of experimental evidence, in BBC (2015; 2016). Hungarian native speakers seem to confirm that the different implicatures are characterized by distinct intonational properties, but this intuition needs to be confirmed in a more systematic way and with the aid of experimental procedures that take focus types (exhaustive, corrective, and mirative focus) as factors. I leave this issue open to future research.

Conventional implicatures are different from conversational implicatures in that they are not pragmatic, context-dependent meanings, and cannot be cancelled. At the same time, they are different from semantic operators insofar as they belong to and operate on a distinct dimension of meaning.<sup>16</sup> At this point, a clarification is still in order: the differences and similarities between the conventional implicature and the semantic presupposition account. I address this issue in the remainder of this section.

At first sight, the two analysis may appear almost indistinguishable: they both rely on the hypothesis that exhaustivity is not asserted (as part of the at-issue content of a FF sentence) and that it emerges from the generation of a focus structure. É. Kiss (2006; 2007; 2010) analyses Hungarian FF sentences as predication structures, whereby focus movement is motivated by the need of establishing a syntactic predication relation (see also Surányi 2011). In this approach, the focus structure is determined by the specificational predication relation between the focus and the background. On a par with the conventional implicature analysis, thus, the predication analysis too takes the focus structure to be subordinate to some other meaning component and a structural requirement for the overall semantic interpretation of the sentence. The definition of focus-background adopted by É. Kiss is however different from that maintained in BBC (2015; 2016) and defended in this paper. In É. Kiss's account the background of a focus structure is encoded as [+presupposed]. Within the conventional implicature analysis, by contrast, the background need not be given or presupposed; what is essential is the generation of a set of focus alternative propositions that share the same background and that are needed for the correct interpretation of the implicature. Mirative FF, in fact, also works in the case of out-of-the-blue contexts (cf. § 3).

It is important to note that the latter analysis is more flexible and allows us to account for the constructions discussed in É. Kiss (2012), in

16. This distinction is confirmed by the semantic and pragmatic differences between FF sentences and sentences with the semantic operator *csak* 'only', see É. Kiss (1998), Onea & Beaver (2011), Gerőcs, Babarczy & Surányi (2014), Káldi, Babarczy & Bende-Farkas (2017), and Pintér (2017).

which the focus–background articulation seems to have been grammaticalized, so that a possible exhaustive specification of the focus is redundant and that the background conveys contextually new information. She thus admits that Hungarian fronted foci are not always and necessarily exhaustive, in the same way as the background need not always be presupposed. This happens for instance in answers to quiz questions (42) and newspaper headlines (43):

- (42) a. Mit tudsz Rubik Ernőről?  
 what.ACC know.2SG Rubik Ernő-about  
 ‘What do you know about Ernő Rubik?’
- b. Rubik Ernő / ő találta fel a Rubik-kockát.  
 Rubik Ernő he invent.PST.3SG VM the Rubik-cube  
 ‘It was Ernő Rubik/ it was him who invented Rubik’s cube.’  
 (É. Kiss 2012: 197)
- (43) EGYENRUHÁBAN menne a bíróságra a norvég  
 uniform.in go.COND.3SG the court.to the Norwegian  
 mészáros.  
 butcher  
 ‘The Norwegian butcher would go to court *in uniform*.’  
 (É. Kiss 2012: 201)

Given this characterization, it would be tempting to analyse such structures as the grammaticalized (or stylistic) by-product of a conventional implicature with mirative import. Take the title of a newspaper article with FF, as that in (43). According to É. Kiss (2012: 202), “its purpose is to highlight the focus, to attract readers’ attention by emphasizing the most unexpected, most striking element of an event. This is attained by relegating the rest of the title, representing expected, inferrable elements of the event or situation, into the background”. This description is closely reminiscent of the mirative import which yields unexpectedness on the basis of comparison within a set of alternatives, but which, crucially, does not require a presupposed or given background. (See É. Kiss 2012 for the discussion of the other contexts or structures with no presupposed background, but where the presence of alternatives seems to be interpretively more relevant).

## 6 Conclusions

In this paper I proposed an account of the exhaustivity associated with FF in Hungarian that presents several advantages with respect to the alternative solutions. Exhaustivity is analysed as a conventional implicature,

and this analysis provides a natural explanation of why this semantic value has only been conventionalized in Hungarian, starting from a context in which it was originally supported by pragmatic factors, i.e. answers to questions. The conventional implicature analysis is able to capture not only the crosslinguistic, but also the language-internal variation. Although exhaustivity is associated with FF in answers to questions and in other contexts (the exhaustive implicature), other meanings –still to be analysed as conventional implicatures– are generated in different contexts. Indeed, the syntactic operation FF is also exploited for the expression of surprise or unexpectedness (the mirative implicature) as well as to perform a correction (the corrective implicature). These implicatures belong to the non-at-issue dimension of meaning. They are tightly linked to the focus structure created through FF in that they need a set of focus alternative propositions in order to be interpreted properly.

Crucially, under this analysis, the focus–background partition need not be specified for semantic or pragmatic values (e.g. the background need not be given or presupposed, and the focus need not be exhaustive). The syntactic operation FF, thus, does not always serve the function of generating a new–given or focus–presupposition articulation of the sentence, but provides the basis for building a non-at-issue meaning, i.e. a conventional implicature, including in the special uses discussed in É. Kiss (2012) which can be viewed as further cases of grammatical conventionalization.

Since the implicature is ultimately responsible for syntactic movement, as well as for the meaning, the use and the grammatical properties of the structure featuring FF, a cartographic implementation lends itself rather naturally to represent the patterns and the interface properties imposed by the syntax. Following the cartographic and feature-driven approach to syntax in BBC (2015; 2016), I proposed that the conventional implicatures associated with focus are encoded in the syntax in the form of active syntactic features that trigger movement and that directly tailor and deliver the relevant instructions to the interfaces.



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